

**REMARKS**

Reconsideration and the timely allowance of the pending claims, in view of the following remarks, are respectfully requested.

In the pending Office Action, the Examiner rejected claims 2-7 under 35 U.S.C. § 103(a) as being unpatentable over the '421 patent to Brice in view of the '510 patent to Lamond et al., and rejected claims 2-5 and 8-9 under 35 U.S.C. § 103(a) as being unpatentable over the '421 patent to Brice in view of the '482 patent to Desimone et al. In the Paper No. 6 Office Action, the Examiner rejected claim 1 as being anticipated by the '421 patent to Brice (see also the Paper No. 10 Interview Summary: "Examiner feels . . . [claim 1] does not define over" the '421 patent to Brice).

Prior to the entry of this Amendment, claims 2-9 were submitted for examination. By this Amendment, Applicant has (i) amended claims 2-3 and 8-9 to provide a clearer presentation of the claimed invention and (ii) presented new claim 1, in amended form to also provide a clearer presentation of the claimed invention, and claims 10-11, all of the which find support in the Specification as filed. Accordingly, claims 1-11 are submitted for examination, of which claims 1 and 10 are independent.

Applicant respectfully traverses the rejections under 35 U.S.C. §§ 112, 102(b), and 103(a) for the reasons presented herein.

1. **Drawings**

The drawings were objected to under 37 C.F.R. § 1.83(a). Applicant has amended claims 8 and 9 to clarify the claimed invention. As such, Applicant respectfully submits that the objection of the drawings under 37 C.F.R. § 1.83(a) has been fully addressed, and the drawings are now in proper form.

2. Rejection Under 35 U.S.C. § 112

Claims 8 and 9 were rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification. Applicant respectfully traverses the rejection. Claims 8 and 9 have been amended to clarify the claimed invention. Applicant respectfully submits that the rejection under 35 U.S.C. § 112, first paragraph, has been fully addressed, and the claims are now in proper form for allowance.

3. Rejection Under 35 U.S.C. § 102

A. Claims 1-9

Claim 1 was rejected under 35 U.S.C. § 102(b) as being anticipated by the '421 patent (see the Paper No. 6 Office Action; see also the Paper No. 10 Interview Summary). The Examiner reported that the '421 patent "discloses the invention as is claimed." The Examiner also reported that the "wherein" phrase at the end of Applicant's claim 1 "does not appear to define any structure or particular structural relationships not disclosed" by the '421 patent. Applicant respectfully traverses the rejection.

Applicant's amended independent claim 1 claims a toothbrush requiring: a handle; first and second necks coupled to the handle; first and second bristle supports coupled to the necks; a plurality of first bristles coupled to the first bristle support; and a plurality of second bristles coupled to the second bristle support. The claimed plurality of first and second bristles have a stiffness, and the claimed first and second necks have a resiliency, a flexibility and a bending resistance. The resiliency, flexibility and bending resistance of the claimed necks are set depending upon both (i) a brushing force and (ii) the stiffness of the claimed bristles, such that the toothbrush, through the bristles coupled

to the necks, adapts to a dento-gingival junction and all other changing surfaces encountered during brushing to disrupt plaque.

On the other hand, the Examiner reported that the '421 patent has only "some relationship" between the brushing force and the resilience, flexibility, and bending resistance of its necks. (see FIG. 10). The '421 patent discloses no relationship between the stiffness of its bristles and the resilience, flexibility, and bending resistance of its necks. Furthermore, the '421 patent fails to disclose in any fashion that the resiliency, flexibility and bending resistance of the necks of its toothbrush are set depending upon both (i) a brushing force and (ii) the stiffness of its bristles, such that the toothbrush, through the bristles coupled to the necks, adapts to a dento-gingival junction and all other changing surfaces encountered during brushing to disrupt plaque.

Thus, Applicant respectfully submits that amended claim 1, which requires the resiliency, flexibility, and bending resistance of the necks to be set depending upon the brushing force and the stiffness of the bristles, is clearly not anticipated by the '421 patent, which discloses, at least, no relationship whatever between the resiliency, flexibility, and bending resistance of its necks and the stiffness of its bristles. Applicant respectfully submits that the '421 patent fails to teach all the features recited in the rejected independent claim, as well as its dependent claims, and therefore cannot be construed as anticipating the claimed invention. Moreover, the '421 patent includes no suggestion for modifying its necks as to change their configurations to include the claimed features, and therefore cannot be construed as rendering obvious the claimed invention. As such, Applicant respectfully requests that the rejection of claims 1-9 under 35 U.S.C. § 102 be withdrawn. Independent claim 1 is allowable. In addition, its

dependent claims are allowable for reasons of their dependencies, as well as their additional limitations. For example, amended claim 9 requires that the resiliency, flexibility and bending resistance of the necks and the bristle supports to be set depending upon both (i) the brushing force and (ii) the stiffness of the bristles.

**B. Claims 10-11**

Applicant's new independent claim 10 claims a toothbrush requiring: a handle; first and second necks coupled to the handle; first and second bristle supports coupled to the necks; a plurality of first bristles coupled to the first bristle support; and a plurality of second bristles coupled to the second bristle support. The claimed plurality of first and second bristles have a stiffness, and the claimed first and second necks have a resiliency, a flexibility and a bending resistance. The stiffness of the claimed bristles is set depending upon both (i) a brushing force and (ii) the resiliency, flexibility and bending resistance of the claimed necks, such that the toothbrush, through the bristles coupled to the necks, adapts to a dento-gingival junction and all other changing surfaces encountered during brushing to disrupt plaque.

On the other hand, the '421 patent discloses no relationship between the stiffness of its bristles and the resilience, flexibility, and bending resistance of its necks. Furthermore, the '421 patent fails to disclose in any fashion that the stiffness of the bristles of its toothbrush is set depending upon both (i) a brushing force and (ii) the resiliency, flexibility and bending resistance of the necks, such that the toothbrush, through the bristles coupled to the necks, adapts to a dento-gingival junction and all other changing surfaces encountered during brushing to disrupt plaque.

Thus, Applicant respectfully submits that new claim 10, which requires the stiffness of the bristles to be set depending upon a brushing force and the resiliency, flexibility and bending resistance of the necks, is clearly not anticipated by the '421 patent, which discloses, at least, no relationship whatever between the stiffness of its bristles and the resiliency, flexibility, and bending resistance of its necks. Applicant respectfully submits that the '421 patent fails to teach all the features recited in the independent claim, as well as its dependent claim, and therefore cannot be construed as anticipating the claimed invention. Moreover, the '421 patent includes no suggestion for modifying its bristles as to change their configurations to include the claimed features, and therefore cannot be construed as rendering obvious the claimed invention. As such, independent claim 10 is allowable. In addition, its dependent claim is allowable for reasons of its dependency, as well as its additional limitations. For example, new claim 11 requires that the stiffness of the bristles to be set depending upon both (i) the brushing force and (ii) the resiliency, flexibility and bending resistance of the necks and the bristle supports.

4. Rejection Under 35 U.S.C. § 103

Claims 2-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the '421 patent in view of the '510 patent. In addition, claims 2-5 and 8-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the '421 patent in view of the '482 patent. Applicant respectfully traverses the rejection. Claims 2-9 have been amended to clarify the claimed invention. Amended claims 2-9 are depended upon amended independent claim 1. As noted above, independent claim 1 has been shown to be allowable. As such, Applicant respectfully requests that the rejection of claims 2-9 under

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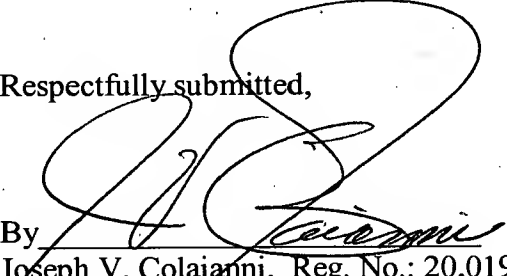
35 U.S.C. § 103(a) be withdrawn. Amended claims 2-9 are allowable for reasons of their dependencies, as well as their additional limitations.

5. Conclusion

In view of the above, the claims are now believed to be in form for allowance, and such an action is hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is requested to telephone the undersigned at the number below.

Attached hereto is a marked-up version of the changes made to the claims by the current Amendment. The attached Appendix is captioned **"Versions with markings to show changes made."**

Respectfully submitted,

  
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Enclosure: Appendix

**APPENDIX**

**VERSIONS WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

The claims are amended as follows:

2. (Twice Amended) The [A] toothbrush of claim 1, further comprising:

[an elongated handle, shaped and dimensioned to be grasped by a human hand, having a first end and a second end, said elongated handle having a cavity open at a location where, when the elongated handle is grasped for using the toothbrush, the thumb of the human hand would normally contact;]

a resilient thumb contact structure inserted in the handle [said cavity], and dimensioned such that the human thumb, when the [elongated] handle is grasped for using the toothbrush, exerts the thumb pressing force [primarily] on the resilient thumb contact[;

a first neck extending from the second end of the elongated handle, having a proximal end attached to the elongated handle and having a distal end;

a second neck extending from the second end of the elongated handle, having a proximal end attached to the elongated handle and having a distal end;

a first bristle support attached to the distal end of the first neck;

a second bristle support attached to the distal end of the second neck;

a plurality of first bristles extending in a first direction from the first bristle support; and

a plurality of second bristles extending in a second direction from the second bristle support].

3. (Amended) The toothbrush of claim 2, wherein the second neck extends from the [second end of the elongated] handle [in a direction substantially] parallel to the first neck.

8. (Amended) The toothbrush of claim [1] 2, wherein the [a resilient thumb contact structure includes a rectangular-shaped resilient thumb contact structure] first bristle support and the second bristle support are twin articulating heads.

9. (Amended) The toothbrush of claim [8] 1, [wherein the cavity of the elongated handle includes a rectangular-shaped cavity]

wherein (i) the plurality of first and second bristles have the stiffness, and (ii) the first and second necks and the first and second bristle supports have the resiliency, the flexibility and the bending resistance, and

wherein the resiliency, flexibility and bending resistance of the necks and the bristle supports are set depending upon both (i) the brushing force and (ii) the stiffness of the bristles, such that the toothbrush, through the bristles coupled to the bristle supports and the necks, adapts to the dento-gingival junction and all other changing surfaces encountered during brushing to disrupt plaque.

Claims 1 and 10-11 are added as new claims. New claim 1 is amended as follows:



1. (Amended) A toothbrush comprising:

[an elongated] a handle[,] shaped and dimensioned to be grasped by a human hand[, having a first end and a second end];

a first neck coupled to the handle [extending from the second end of the elongated handle, having a proximal end attached to the elongated handle and having a distal end];

a second neck coupled to the handle [extending from the second end of the elongated handle parallel to the first neck, having a proximal end attached to the elongated handle and having a distal end];

a first bristle support coupled to the first neck [attached to the distal end of the second neck];

a second bristle support coupled to the second neck [attached to the distal end of the second neck];

a plurality of first bristles coupled to [extending in a first direction from] the first bristle support; and

a plurality of second bristles coupled to the second bristle support [extending substantially parallel to and in the same direction as the first direction from the second bristle support],

wherein the plurality of first and second bristles have a stiffness, and the first and second necks have a resiliency, a flexibility and a bending resistance, and

wherein the resiliency, flexibility and bending resistance of the necks are set depending upon both (i) a brushing force and (ii) the stiffness of the bristles, such that the toothbrush, through the bristles coupled to the necks, adapts to a dento-gingival junction and all other changing surfaces encountered during brushing to disrupt plaque [are

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formed of a material having a first stiffness, and the first and second elongated necks are formed of a material having a predetermined resiliency, a predetermined flexibility and a predetermined bending resistance, and wherein the value of said first stiffness relative to said predetermined resiliency, flexibility and bending resistance is set in accordance with a predetermined brushing force to be applied by said bristles thereby achieving the full functioning of the twin articulating heads in making and maintaining contact with the dento-gingival junction].